

AMENDMENTS TO THE CLAIMS

1. (Cancelled) A highly available transaction processing system comprising:

- operations management and smart plug-n modules;
- a service navigator module;
- a global control module;
- a local control module;
- error analyzer modules;
- a remote mirroring module;
- database modules;
- a database backup module;
- an archive log handling module; and
- a tuxedo module.

2. (Currently Amended) A highly available transaction processing system comprising:

- a primary transaction processing site that includes hardware and software components for processing transactions on behalf of client computers;

- a standby transaction processing site that includes hardware and software components for processing transactions on behalf of client computers and that is continuously updated with data to reflect the data state of the primary transaction processing site; and

- and management components and services that map software and hardware components of the primary transaction processing site and the standby transaction processing site to a set of transaction-processing services, that monitor the primary site for software and hardware errors, that determine when sufficient software and hardware components have failed to prevent one or more services from being provided to clients from the primary transaction processing site, and that fail over the primary site to the standby site in order to continue transaction processing at the remote site when an error

~~the~~ a service failure that prevents continued transaction processing is detected on the primary site.

3. (Original) The highly available transaction processing system of claim 2 wherein the management components and services include a service state display component that displays the operation status of the hardware and software components of the primary and standby sites.

4. (Original) The highly available transaction processing system of claim 2 wherein the management components and services include an interface that allows an application program to determine the status of a data replication operation that replicates data stored by a primary site device on a remote site device

5. (Original) The highly available transaction processing system of claim 2 wherein the management components and services include a rapid database failover and restoration component that fails over database processing from the primary site to the standby site without data loss.

6. (New) The highly available transaction processing system of claim 2 wherein the management components and services include a service-navigator component that provides a hierarchical, graphical view to administrators and operations-staff personnel of the services and hardware and software components that implement the services that together make up the highly available transaction processing system in order to allow administrators and operations-staff personnel to visually assess impacts of failures of software and hardware components to the services.

7. (New) The highly available transaction processing system of claim 2 wherein the management components and services include local control components resident on the primary transaction processing site and on the standby transaction processing site, the local control components coordinating operations local to a

transaction processing site that are invoked upon local failover and other system-related activities.

8. (New) The highly available transaction processing system of claim 7 wherein the management components and services include a global control component that coordinates operation of the local control components at each transaction processing site.

9. (New) The highly available transaction processing system of claim 2 wherein the management components and services include an error-analyzer component that receives error messages sent to the error-analyzer component by software and hardware components of the primary transaction processing site and standby transaction processing site, that analyzes the received error messages to determine appropriate error recovery actions, and that initiates error-recovery actions in response to receiving and analyzing the error messages.

10. (New) The highly available transaction processing system of claim 2 wherein the management components and services include a remote mirroring component responsible for replicating data by redundantly writing data to both local storage devices and remote storage devices.

11. (New) The highly available transaction processing system of claim 2 wherein the management components and services include a database management component that monitors a database management system resident at the primary transaction processing site and a separate database management system resident at the standby transaction processing site, detecting at the primary transaction processing site database failures that can be remedied by a local failover operation, the database management component running at the standby processing transaction site responsible for application of archive logs generated at the primary site to the database management system of the standby processing transaction site.

12. (New) The highly available transaction processing system of claim 2

wherein the management components and services include an archive-log-handling component that manages database-management-system archive-log files at both the primary transaction processing site and the standby transaction processing site.

13. (New) The highly available transaction processing system of claim 2 wherein the management components and services include a tuxedo component responsible for managing customer applications and communications between customer applications and the database management system running at the primary transaction processing site.